



**INVERTER MULTI  
AIR CONDITIONER**

**WALL MOUNTED    type**

---

**SERVICE  
MANUAL**



Models

Indoor unit

MW09Y3FM

MW12Y3FM

MW18Y3FM

Outdoor unit

MR36TQY3F



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# SPECIFICATIONS (INDOOR UNIT)

## ELECTRICAL DATA

TYPE	COOLING & HEATING		
MODEL NAME	MW09Y3FM	MW12Y3FM	MW18Y3FM
POWER SOURCE	1 - 230 / (208) V 60Hz		
COOLING CAPACITY ( Rated / Max )	2.7 kW / 3.3 kW 9,500 / 11,300 BTU/h	3.5 kW / 4.0 kW 12,000 / 13,600 BTU/h	5.2 kW / 5.55 kW 17,800 / 19,000 BTU/h
HEATING CAPACITY ( Rated / Max )	3.2 kW / 3.8 kW 11,000 / 13,000 BTU/h	4.1 kW / 4.5 kW 14,000 / 15,400 BTU/h	6.0 kW / 6.7 kW 20,500 / 23,000 BTU/h
MOISTURE REMOVAL	1.7 Pts/hr (0.8 L/hr)	2.0 Pts/hr (1.1 L/hr)	4.9 Pts/hr (2.3 L/hr)
AIR CIRCULATION-High	324 cfm (550 m³/hr)	377 cfm (640 m³/hr)	388 cfm (660 m³/hr)

Power source of specification : 230V

## FAN MOTOR

DISCRIMINATION		MFD-34ROM		
FAN SPEED ( Cool / Heat )	High	1,200 / 1,200 r.p.m.	1,380 / 1,380 r.p.m.	1,480 / 1,480 r.p.m.
	Middle	1,070 / 1,070 r.p.m.	1,230 / 1,230 r.p.m.	1,380 / 1,380 r.p.m.
	Low	900 / 970 r.p.m.	1,050 / 1,110 r.p.m.	1,200 / 1,200 r.p.m.
	Quiet	800 / 850 r.p.m.	900 / 960 r.p.m.	1,060 / 1,060 r.p.m.

## NOISE LEVEL

NOISE LEVEL ( Cool / Heat )	High	38 dB / 38 dB	43 dB / 43 dB	45 dB / 45 dB
	Middle	34 dB / 34 dB	40 dB / 40 dB	43 dB / 43 dB
	Low	28 dB / 30 dB	33 dB / 34 dB	39 dB / 39 dB
	Quiet	25 dB / 26 dB	28 dB / 30 dB	34 dB / 34 dB

## PIPING

MAXIMUM LENGTH		82 ft. (25 m)	
MAXIMUM HEIGHT		49 ft. (15 m)	
DIAMETER SIZE	Liquid	1/4 inch (6.35 mm)	
	Gas	3/8 inch (9.52 mm)	1/2 inch (12.7 mm)

## MEASUREMENTS

DIMENSIONS	H x W x D	10-13/16 x 31-1/8 x 8-7/16 inch (275 x 790 x 215 mm)
WEIGHT	Net / Gross	18 lbs. / 23 lbs. (8.5 kg / 10.5 kg)

# SPECIFICATIONS (OUTDOOR UNIT)

## ELECTRICAL DATA

TYPE		4 room multi inverter
MODEL NAME		MR36TQY3F
POWER SUPPLY		230 / 208 V
FREQUENCY		60 Hz
AIR CIRCULATION - High	Cooling	2119 cfm (3,600 m³/hr)
	Heating	2237 cfm (3,800 m³/hr)
NOISE LEVEL	Cooling	51 dB
	Heating	53 dB

## COMPRESSOR

TYPE		Hermetic type, Inverter, 4 poles, 3-phase, DC motor, Twin Rotary
DISCRIMINATION		TNB220FPBM9
REFRIGERANT	R410A	7 lb 7/8 oz (3,200 g)

## FAN MOTOR

DISCRIMINATION		MFE-45ROM
HIGH-SPEED	Cooling	850 r.p.m.
	Heating	900 r.p.m.

## REFRIGERANT CHARGE (R410A)

Total Pipe Length	164 ft (50.0 m)	– (Chargeless)
ADDITIONAL CHARGE	197 ft (60.0 m)	8-13/16 oz (250 g)
	230 ft (70.0 m)	1 lb 1-5/8 oz (500 g)
ADDITIONAL CHARGE		9/32 oz/ft (25 g/m)
CHARGELESS		164 ft (50 m)
MAX PIPE LENGTH (each unit)		82 ft (25 m)
MAX PIPE LENGTH (total)		229 ft (70 m)
MAX ELEVATION (between indoor units)		49 ft (15 m)
MAX ELEVATION (between indoor and outdoor units)		49 ft (15 m)
MIN. PIPE LENGTH (each unit)		16 ft (5 m)

## MEASUREMENT

DIMENSIONS	H x W x D	32-7/8 x 35-7/16 x 13 inch (835 x 900 x 330 mm)
WEIGHT	Net / Gross	149 lb / 167 lb (68 kg / 76 kg)

## SPECIFICATIONS (COMBINATION)

### ELECTRICAL DATA ( 230 V )

COMBINATION		MW09Y3FM x 3	MW12Y3FM + MW09Y3FM x 2	MW12Y3FM x 2 + MW09Y3FM
COOLING CAPACITY	Rated	8.1 kW 27,600 BTU/h	8.9 kW 30,400 BTU/h	9.7 kW 33,000 BTU/h
	Max	9.7 kW 33,000 BTU/h	9.9 kW 33,900 BTU/h	10.1 kW 34,600 BTU/h
HEATING CAPACITY	Rated	9.7 kW 33,000 BTU/h	10.4 kW 35,500 BTU/h	10.8 kW 37,000 BTU/h
	Max	11.8 kW 40,200 BTU/h	11.7 kW 40,000 BTU/h	12.0 kW 41,000 BTU/h
INPUT POWER (Cooling)	Rated	2.75 kW	3.30 kW	3.75 kW
	Max	3.74 kW	4.10 kW	4.10 kW
INPUT POWER (Heating)	Rated	2.96 kW	3.10 kW	3.30 kW
	Max	3.80 kW	4.10 kW	4.10 kW
CURRENT (Cooling)	Rated	12.0 A	14.4 A	16.4 A
	Max	16.4 A	18.0 A	18.0 A
CURRENT (Heating)	Rated	13.0 A	13.5 A	14.5 A
	Max	16.6 A	18.0 A	18.0 A

### ELECTRICAL DATA ( 230 V )

COMBINATION		MW12Y3FM x 3	MW18Y3FM + MW09Y3FM x 2	MW09Y3FM x 4
COOLING CAPACITY	Rated	10.3 kW 35,100 BTU/h	10.3 kW 35,200 BTU/h	10.3 kW 35,200 BTU/h
	Max	10.5 kW 35,700 BTU/h	10.5 kW 36,000 BTU/h	10.5 kW 36,000 BTU/h
HEATING CAPACITY	Rated	10.9 kW 37,200 BTU/h	10.9 kW 37,200 BTU/h	10.7 kW 36,500 BTU/h
	Max	12.5 kW 42,600 BTU/h	12.3 kW 42,000 BTU/h	12.3 kW 42,000 BTU/h
INPUT POWER (Cooling)	Rated	4.00 kW	4.00 kW	4.00 kW
	Max	4.10 kW	4.10 kW	4.10 kW
INPUT POWER (Heating)	Rated	3.30 kW	3.30 kW	3.00 kW
	Max	3.80 kW	3.80 kW	3.70 kW
CURRENT (Cooling)	Rated	17.5 A	17.5 A	17.5 A
	Max	18.0 A	18.0 A	18.0 A
CURRENT (Heating)	Rated	14.5 A	14.5 A	13.1 A
	Max	16.6 A	16.6 A	16.2 A

## OUTLINE AND DIMENSIONS

### INDOOR UNIT

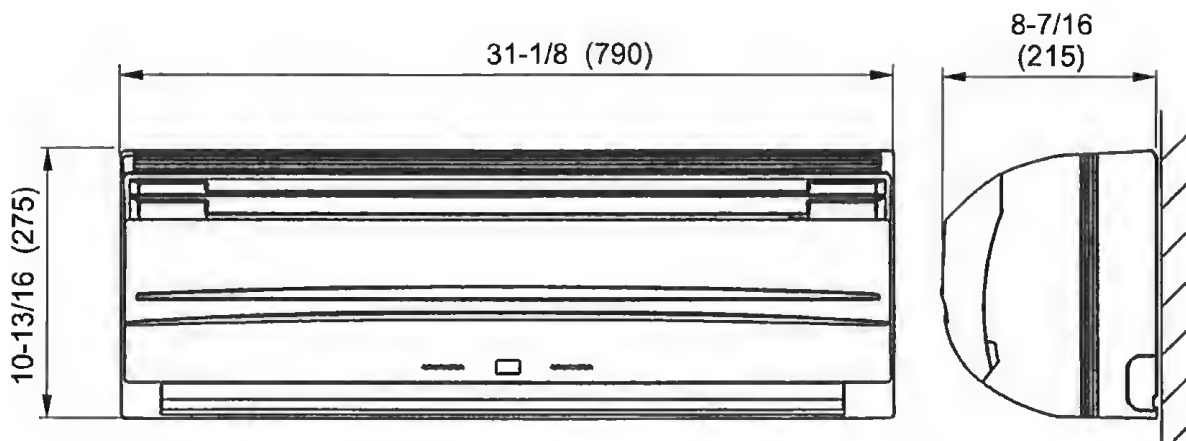
Models :

MW09Y3FM

MW12Y3FM

MW18Y3FM

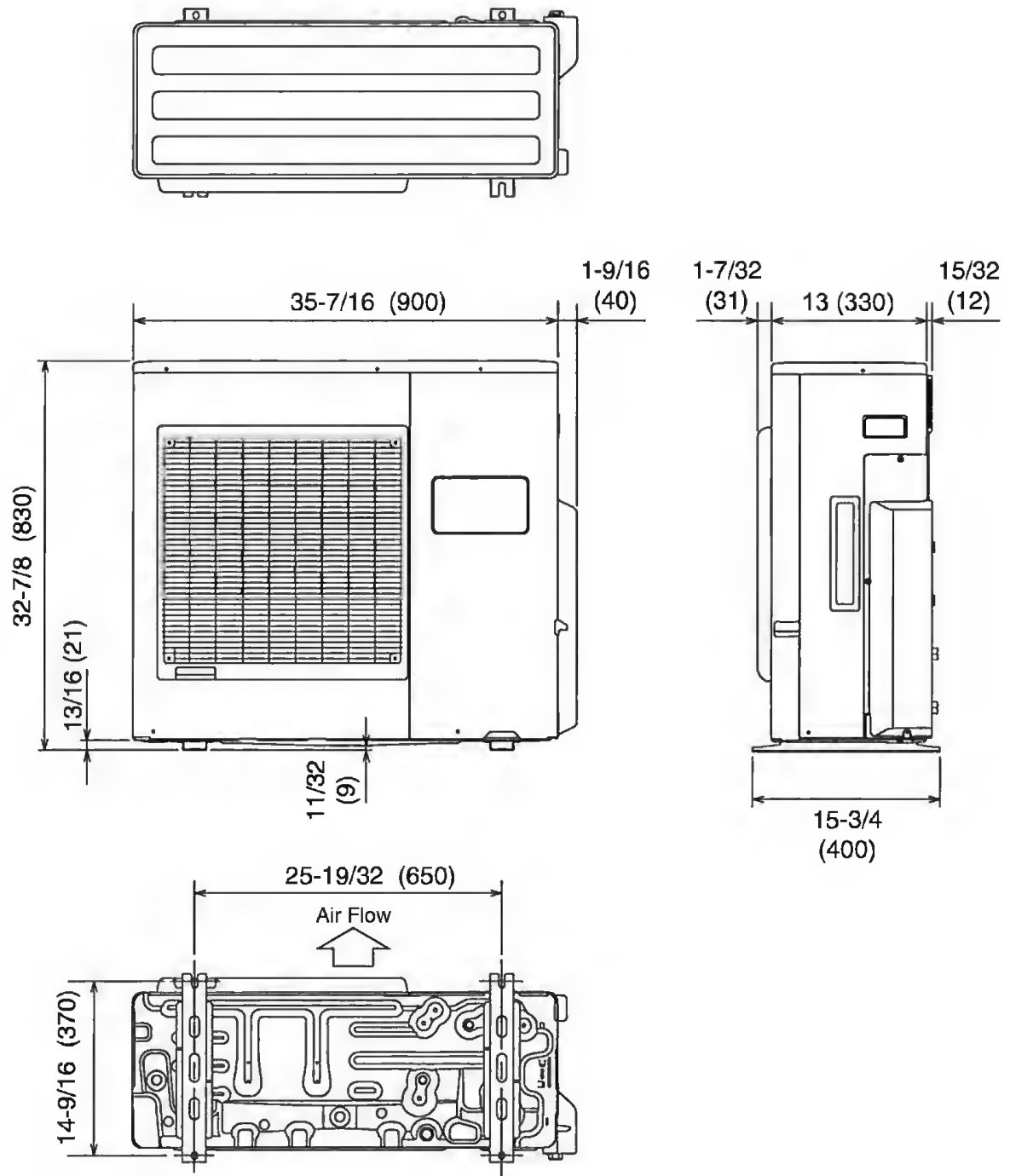
Unit : inch (mm)



## OUTDOOR UNIT

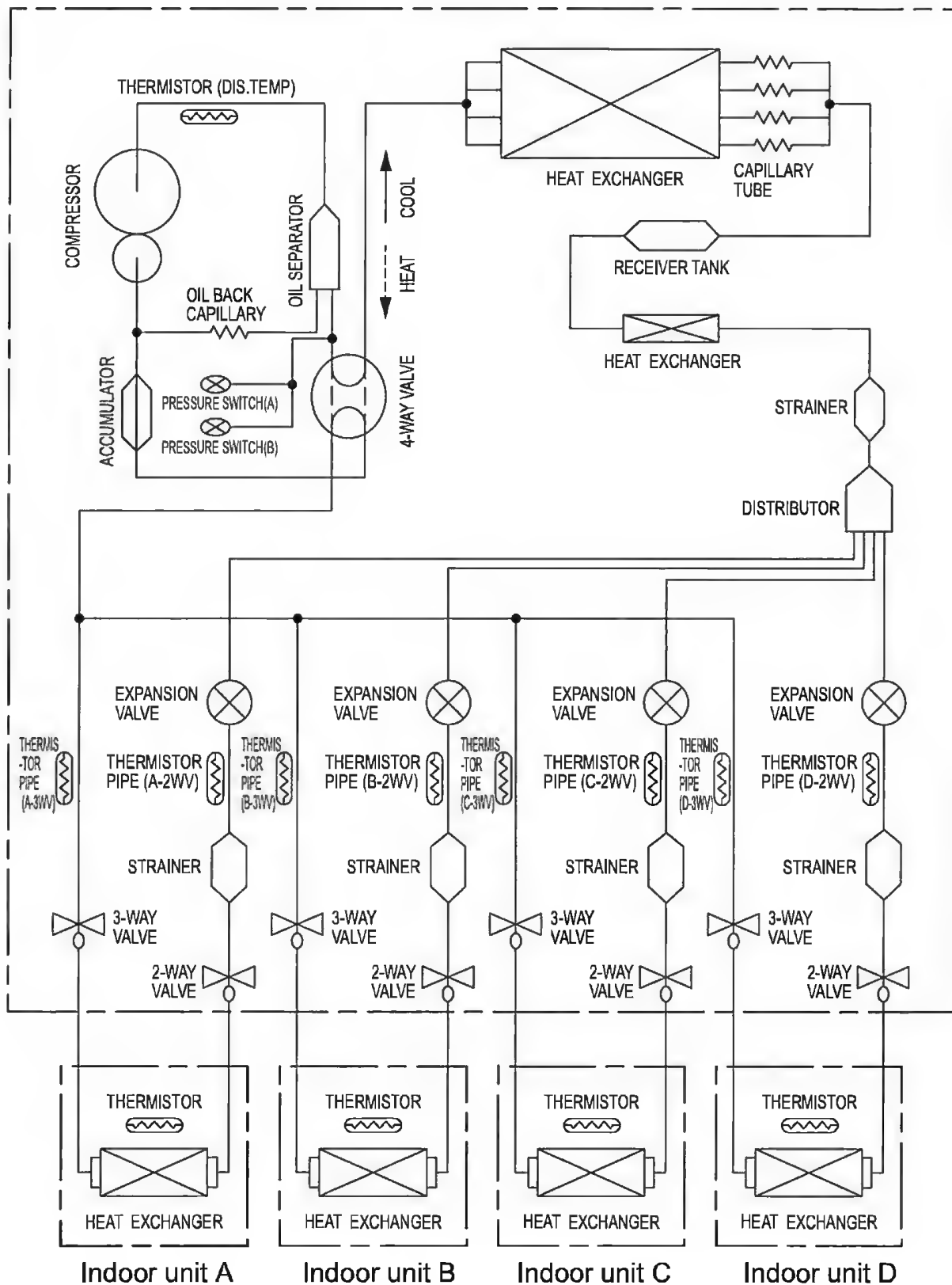
Model : MR36TQY3F

Unit : inch (mm)



# REFRIGERANT SYSTEM DIAGRAM

Outdoor unit



# CIRCUIT DIAGRAM

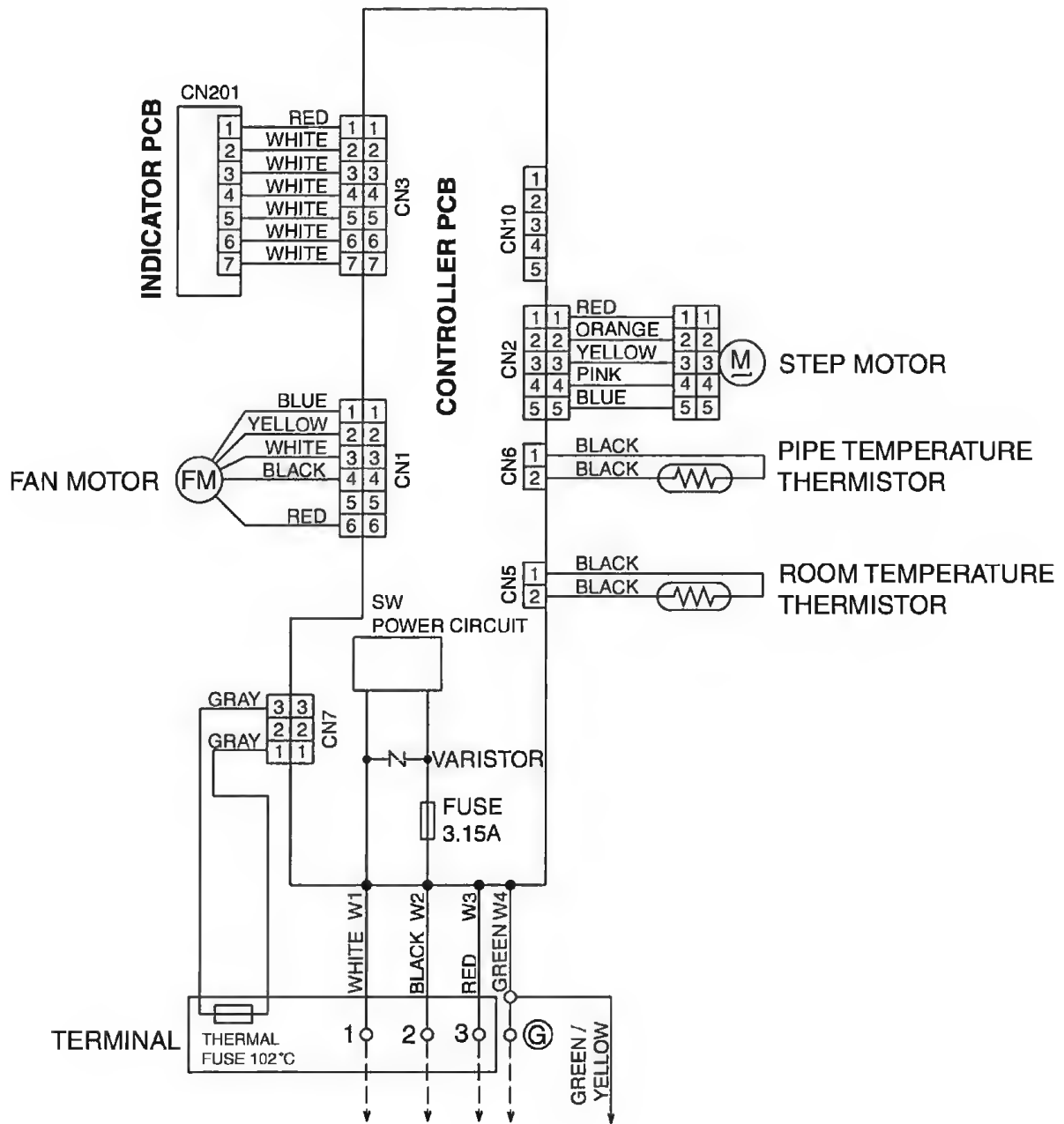
## INDOOR UNIT

Models :

MW09Y3FM

MW12Y3FM

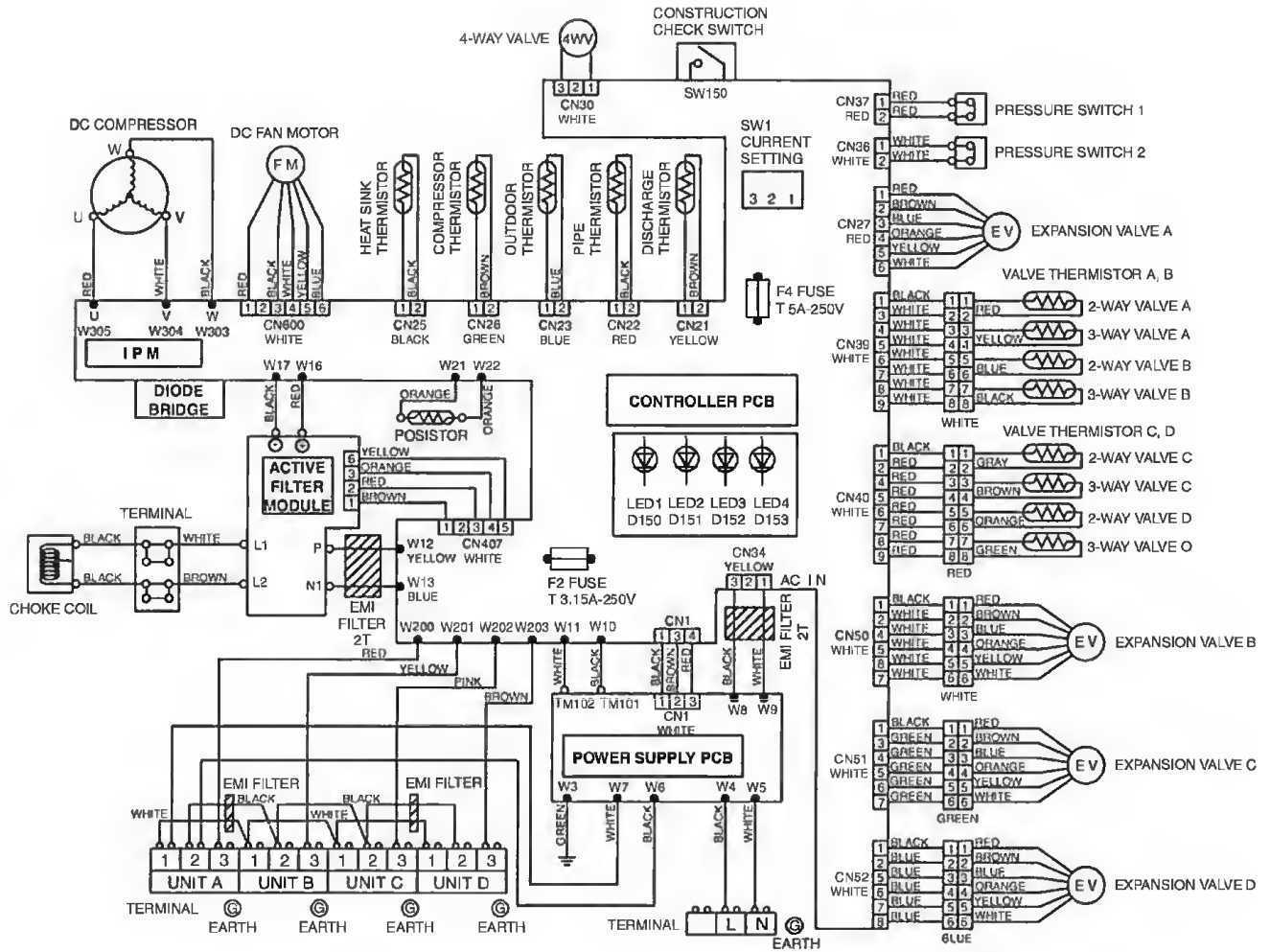
MW18Y3FM





# OUTDOOR UNIT

Model : MR36TQY3F



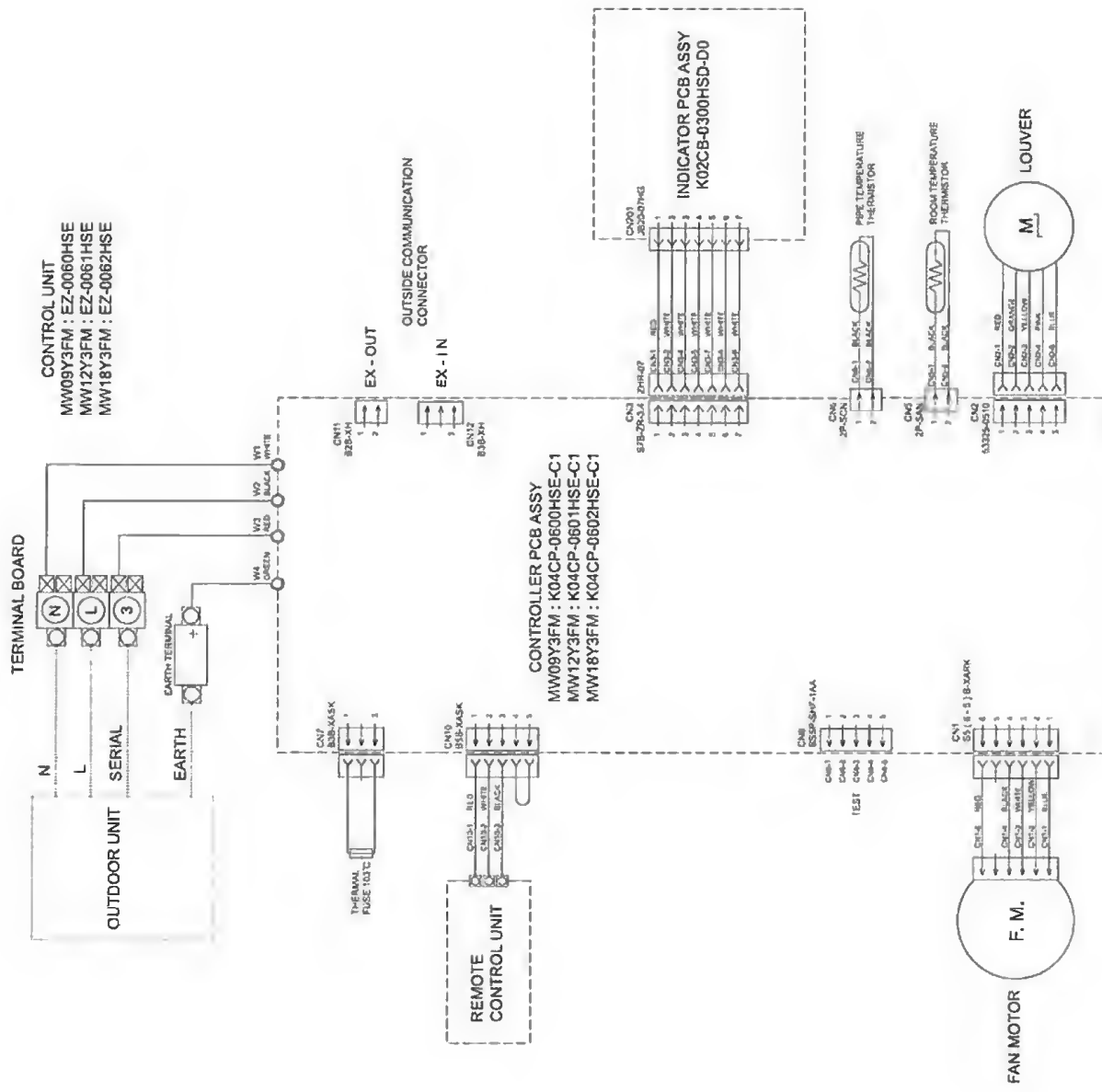
## INDOOR PCB CIRCUIT DIAGRAM

### Models :

MW09Y3FM

MW12Y3FM

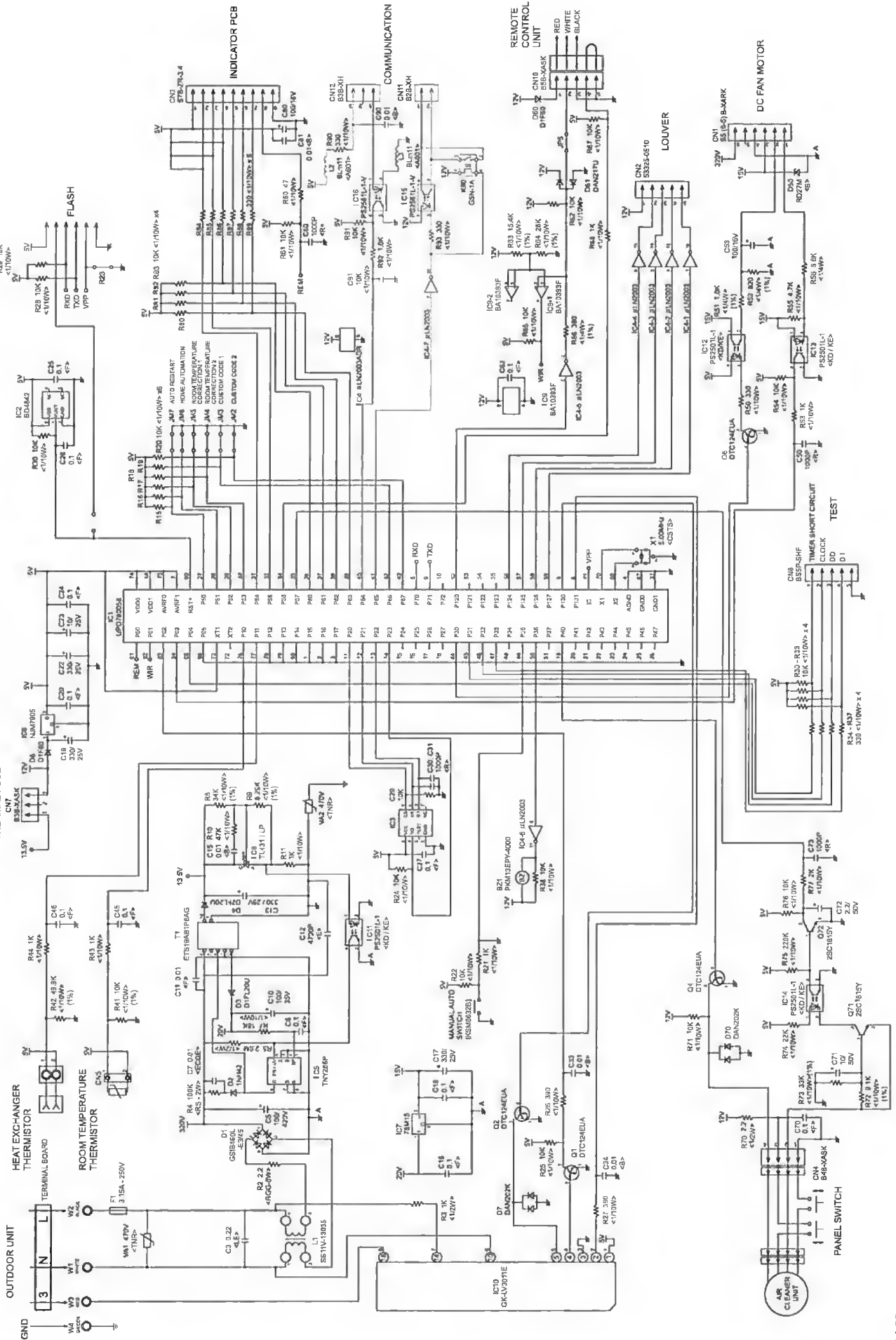
MW18Y3FM



Models :  
 MW09Y3FM  
 MW12Y3FM  
 MW18Y3FM

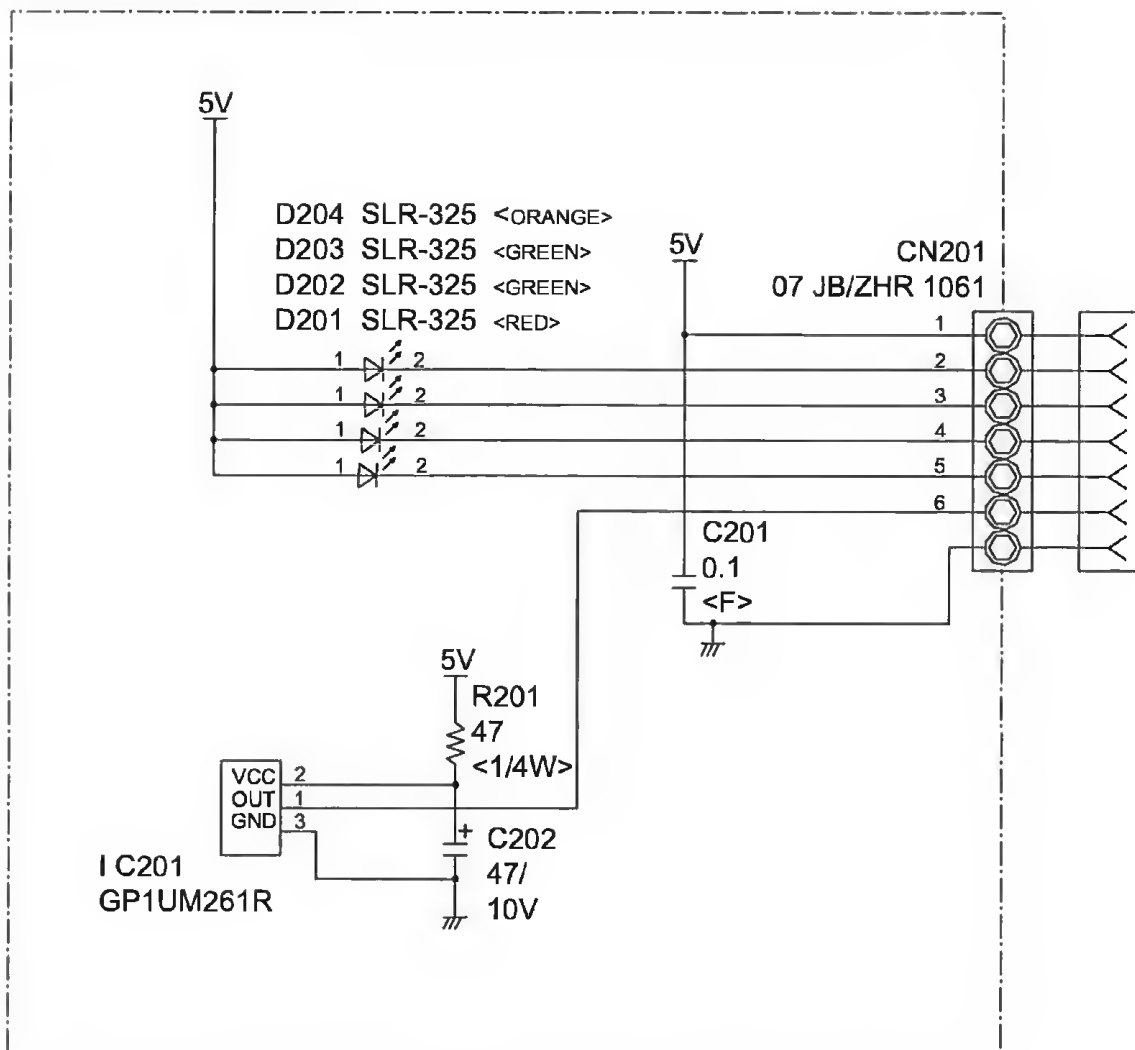
CONTROLLER PCB ASSY  
 MW09Y3FM : K04CP-0600HSE-C1  
 MW12Y3FM : K04CP-0601HSE-C1  
 MW18Y3FM : K04CP-0602HSE-C1

THERMAL FUSE



Models :  
 MW09Y3FM  
 MW12Y3FM  
 MW18Y3FM

## INDICATOR PCB ASSEMBLY K02CB-0300HSD-D0

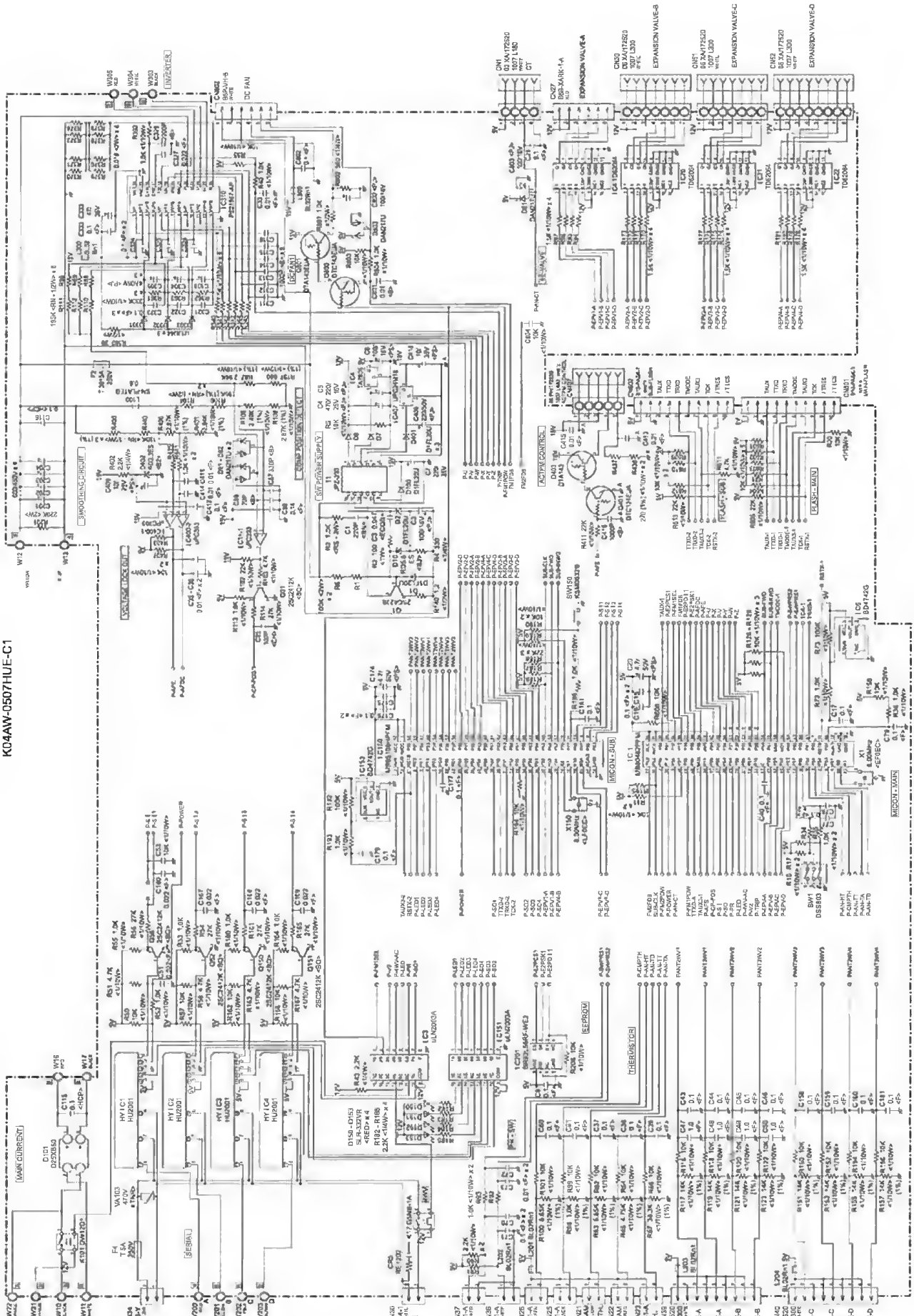


## Model : MR36TQY3F



Model : MR36TQY3F

# CONTROLLER PCB ASSEMBLY K04AW-0507HUE-C1





# ERROR CONTENTS

## INDOOR UNIT

Models :  
MW09Y3FM  
MW12Y3FM  
MW18Y3FM

Error contents		Error display Indoor unit LED			
		OPERATION (Red)	TIMER (Green)	AIR CLEAN or QUIET (Green)	COIL DRY (Orange)
Communication error	Indoor unit - Outdoor unit	off	2 - 5 flashes	off	off
Indoor unit temperature error	Room temp. sensor error	2 flashes	2 flashes	off	off
	Heat exchanger temp. sensor error	2 flashes	3 flashes	off	off
Outdoor unit temperature error	Discharge pipe temp. sensor error	3 flashes	2 flashes	off	off
	Heat exchanger temp. sensor error	3 flashes	3 flashes	off	off
	Outdoor temp. sensor error	3 flashes	4 flashes	off	off
	2 way valve temp. sensor error	3 flashes	off	2 flashes	off
	3 way valve temp. sensor error	3 flashes	off	3 flashes	off
	Heat sink temp. sensor error	3 flashes	7 flashes	off	off
	Compressor temp. sensor error	3 flashes	8 flashes	off	off
Indoor unit control system error	MANUAL AUTO button error	4 flashes	2 flashes	off	off
	50Hz / 60Hz distinguish error	4 flashes	4 flashes	off	off
	Electronic Air clean filter error	4 flashes	7 flashes	off	off
	Electronic Air clean filter error	4 flashes	8 flashes	off	off
Outdoor unit control system error	Current trip error	5 flashes	2 flashes	off	off
	CT error	5 flashes	3 flashes	off	off
	Compressor position error	5 flashes	5 flashes	off	off
	Fan motor error	5 flashes	6 flashes	off	off
	Connected Indoor unit error	5 flashes	7 flashes	off	off
	Main CPU - sub CPU communication error	5 flashes	8 flashes	off	off
Indoor unit fan motor error	Fan motor error	6 flashes	2 flashes	off	off
	Fan motor error	6 flashes	3 flashes	off	off
Refrigerant system error	Discharge pipe temp. error	7 flashes	2 flashes	off	off
	High pressure error	7 flashes	3 flashes	off	off
	High pressure switch error	7 flashes	6 flashes	off	off
Added function error	Active filter error	8 flashes	2 - 3 flashes	off	off
Indoor unit connect error	Indoor unit model error	blinking	blinking	blinking	blinking



## OUTDOOR UNIT LEDS

	LED 1	LED 2	LED 3	LED 4
Communication error (indoor unit A to outdoor unit)	● 1 time	—	—	—
Communication error (indoor unit B to outdoor unit)	—	● 1 time	—	—
Communication error (indoor unit C to outdoor unit)	—		● 1 time	—
Communication error (indoor unit D to outdoor unit)	—	—	—	● 1 time
Discharge pipe temperature sensor	● 2 times	—	—	—
Outdoor heat exchanger temperature sensor	● 3 times	—	—	—
Outdoor temperature sensor	● 4 times	—	—	—
Outdoor 2way valve(A) temperature sensor	● 5 times	—	—	—
Outdoor 2way valve(B) temperature sensor	—	● 5 times	—	—
Outdoor 2way valve(C) temperature sensor	—	—	● 5 times	—
Outdoor 2way valve(D) temperature sensor	—	—	—	● 5 times
Outdoor 3way valve(A) temperature sensor	● 6 times	—	—	—
Outdoor 3way valve(B) temperature sensor	—	● 6 times	—	—
Outdoor 3way valve(C) temperature sensor	—	—	● 6 times	—
Outdoor 3way valve(D) temperature sensor	—	—	—	● 6 times
Compressor temperature sensor	● 7 times	—	—	—
Heatsink temperature sensor	● 8 times	—	—	—
Pressure switch A abnormal	● 9 times	—	—	—
Pressure switch B abnormal	● 10 times	—	—	—
Indoor unit connection capacity error	● 11 times	—	—	—
IPM error	● 12 times	—	—	—
Compressor later location error	● 13 times	—	—	—
Compressor can not start to operate	● 14 times	—	—	—
Outdoor fan (upper) motor error	● 15 times	—	—	—
Outdoor fan (lower) motor error	● 16 times	—	—	—
Microcomputer error	● 17 times	—	—	—

● : Slow flashing

- : Off

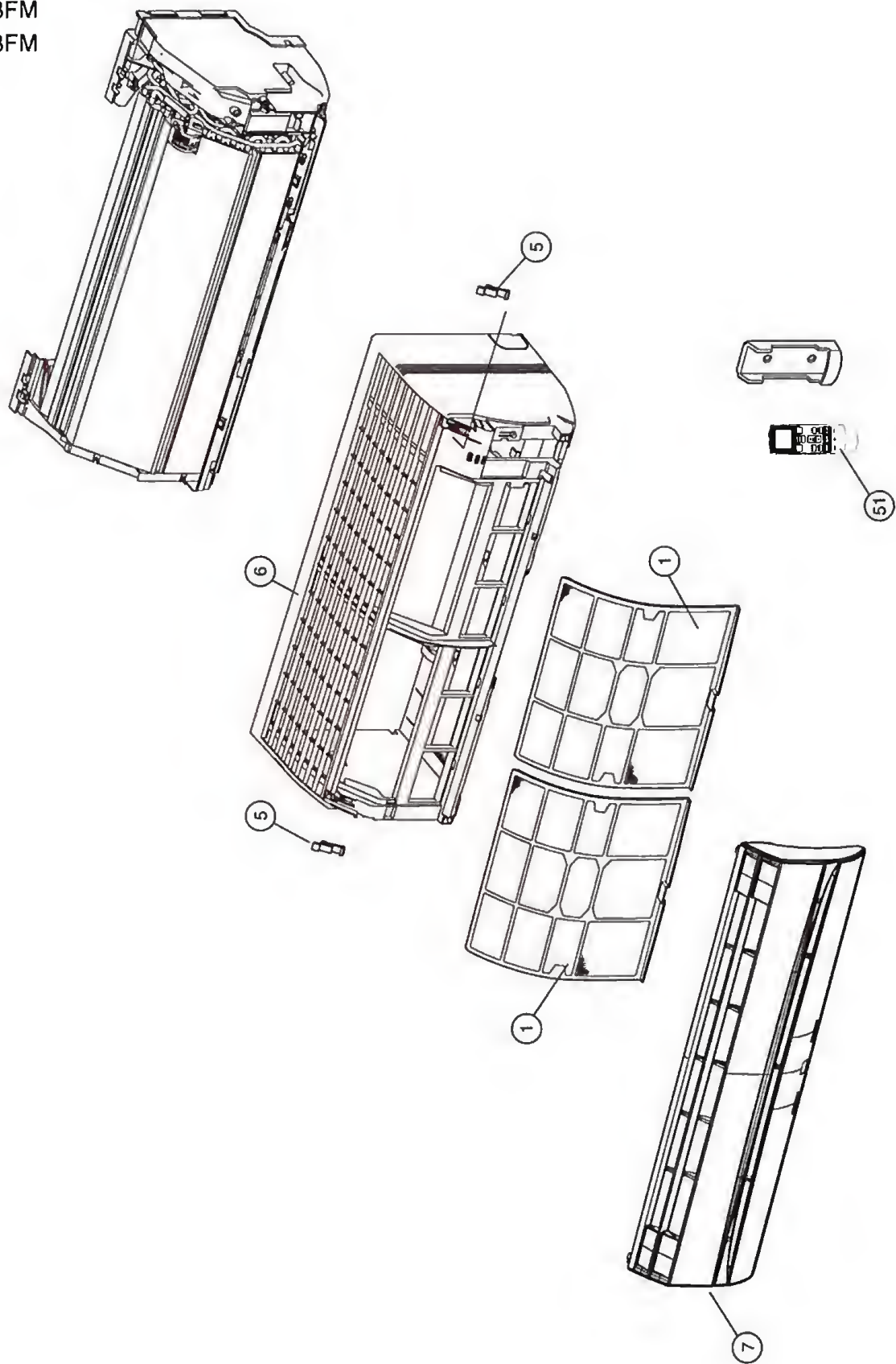
## DISASSEMBLY ILLUSTRATION

Models :

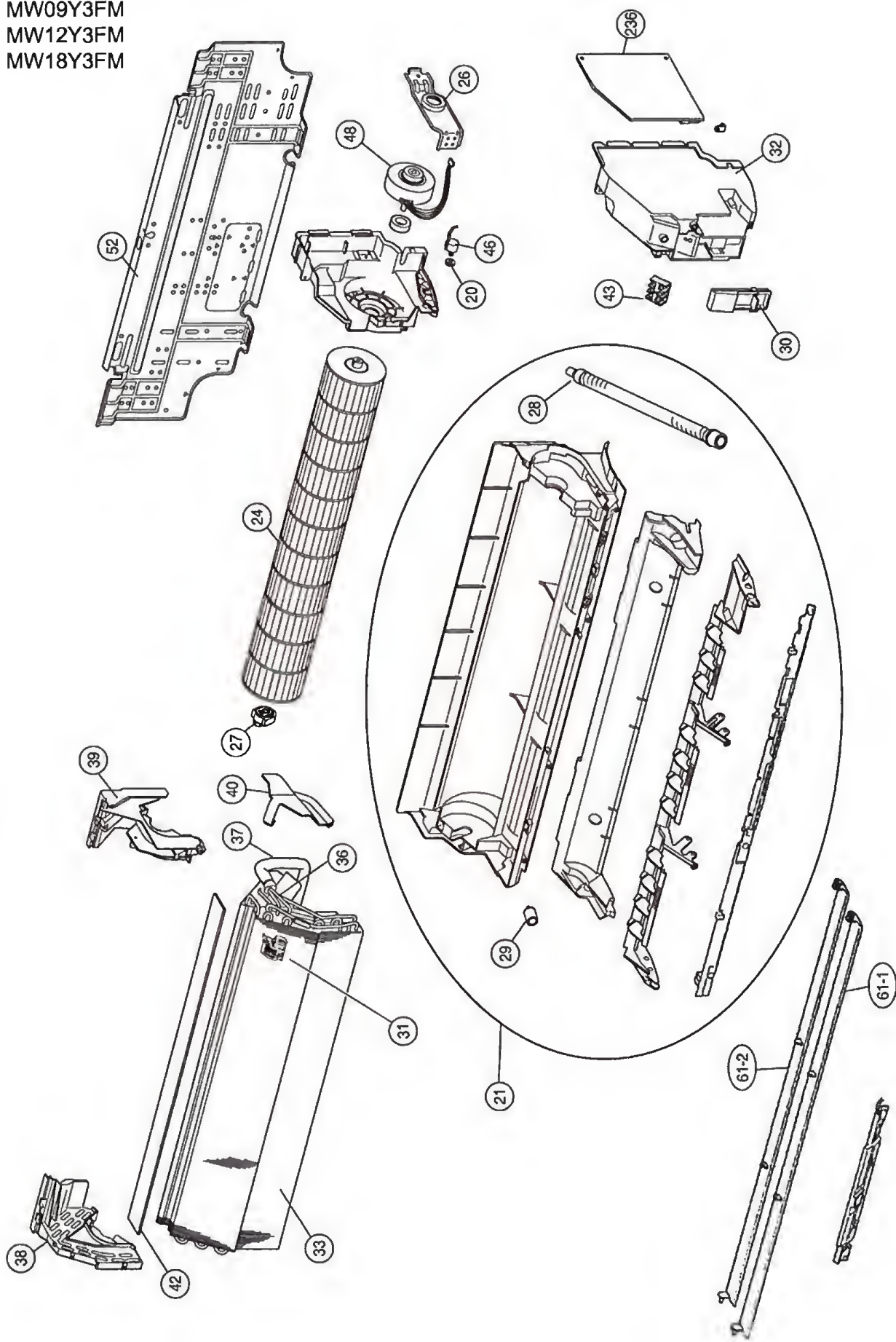
MW09Y3FM

MW12Y3FM

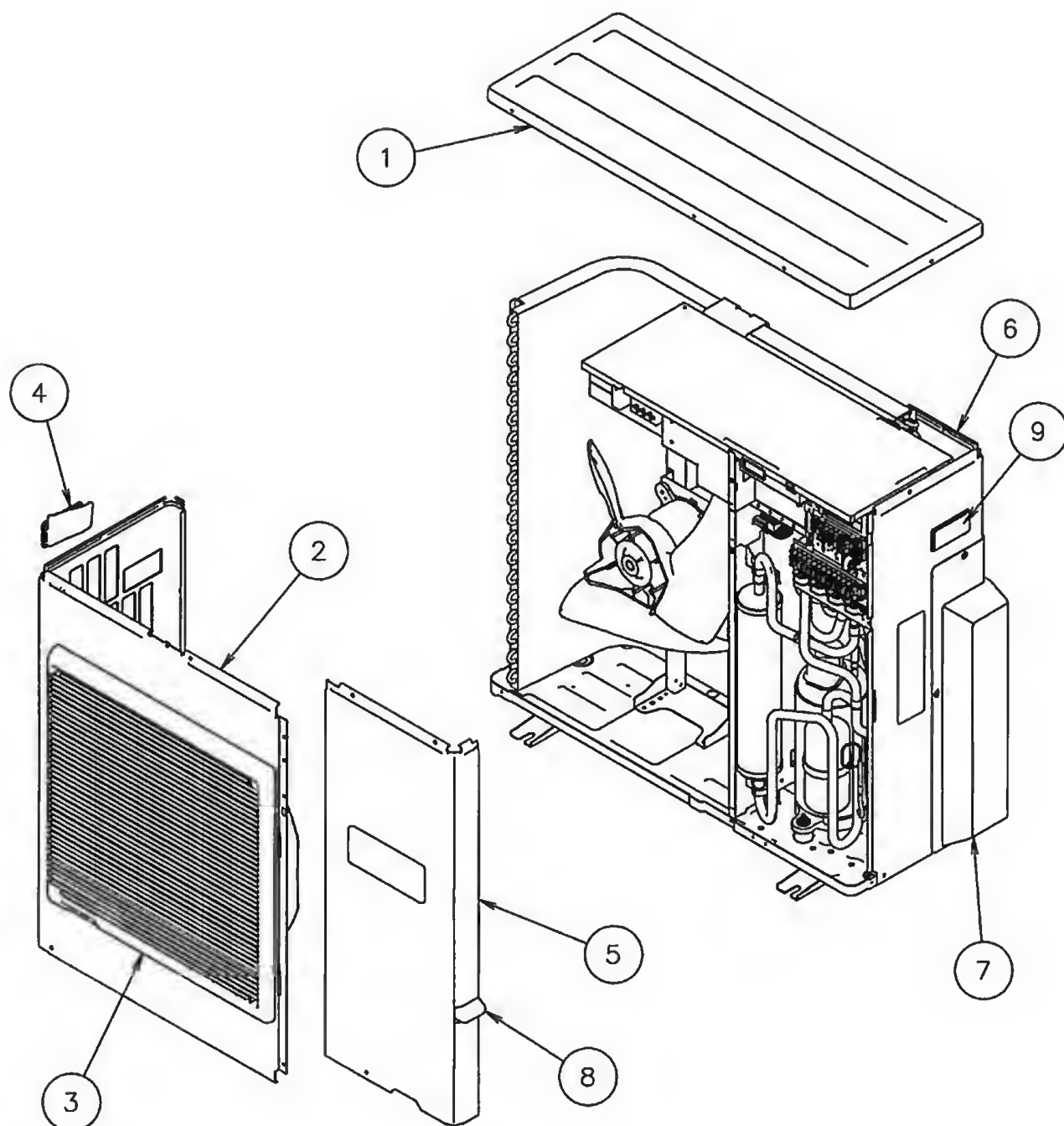
MW18Y3FM



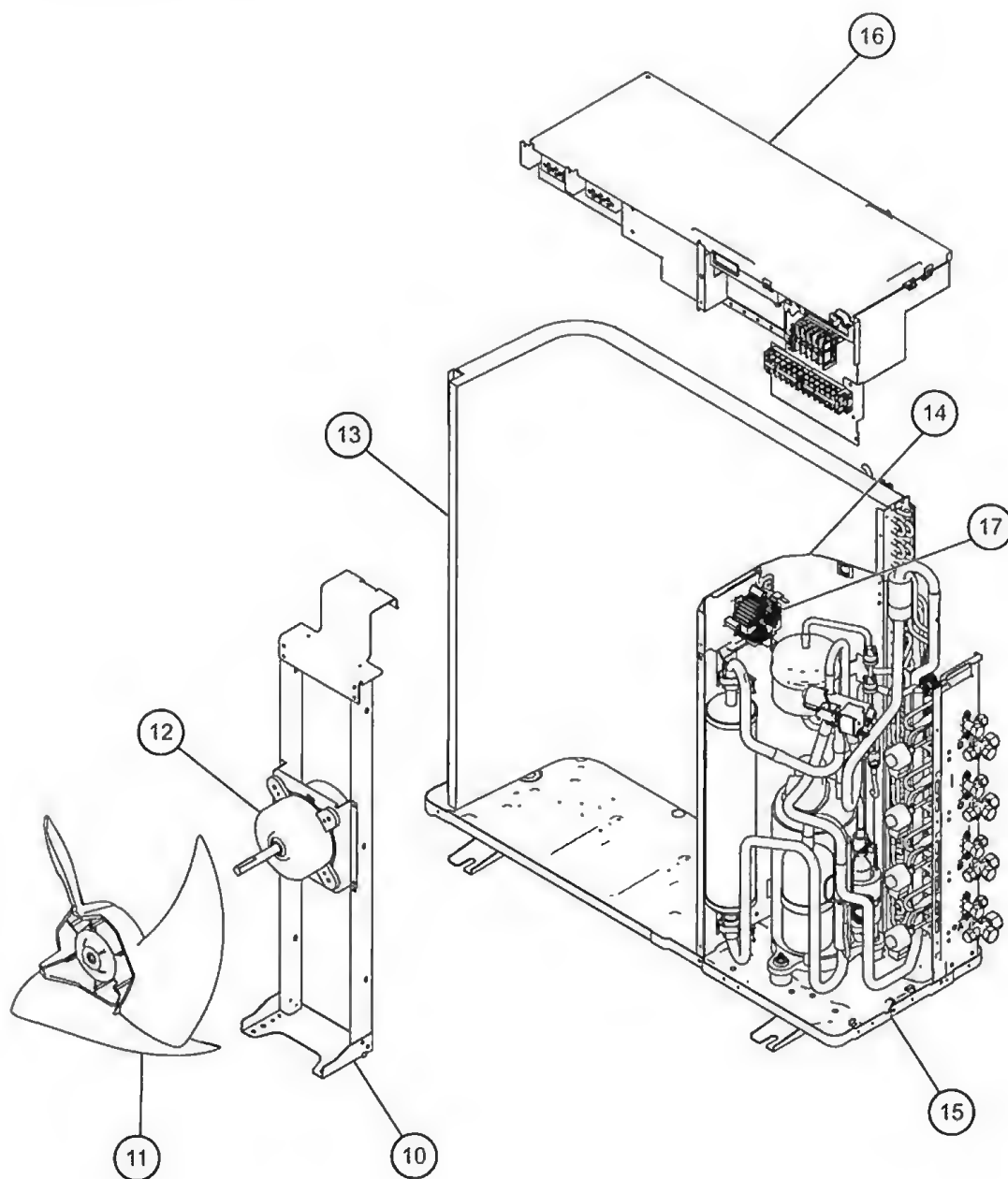
Models :  
 MW09Y3FM  
 MW12Y3FM  
 MW18Y3FM



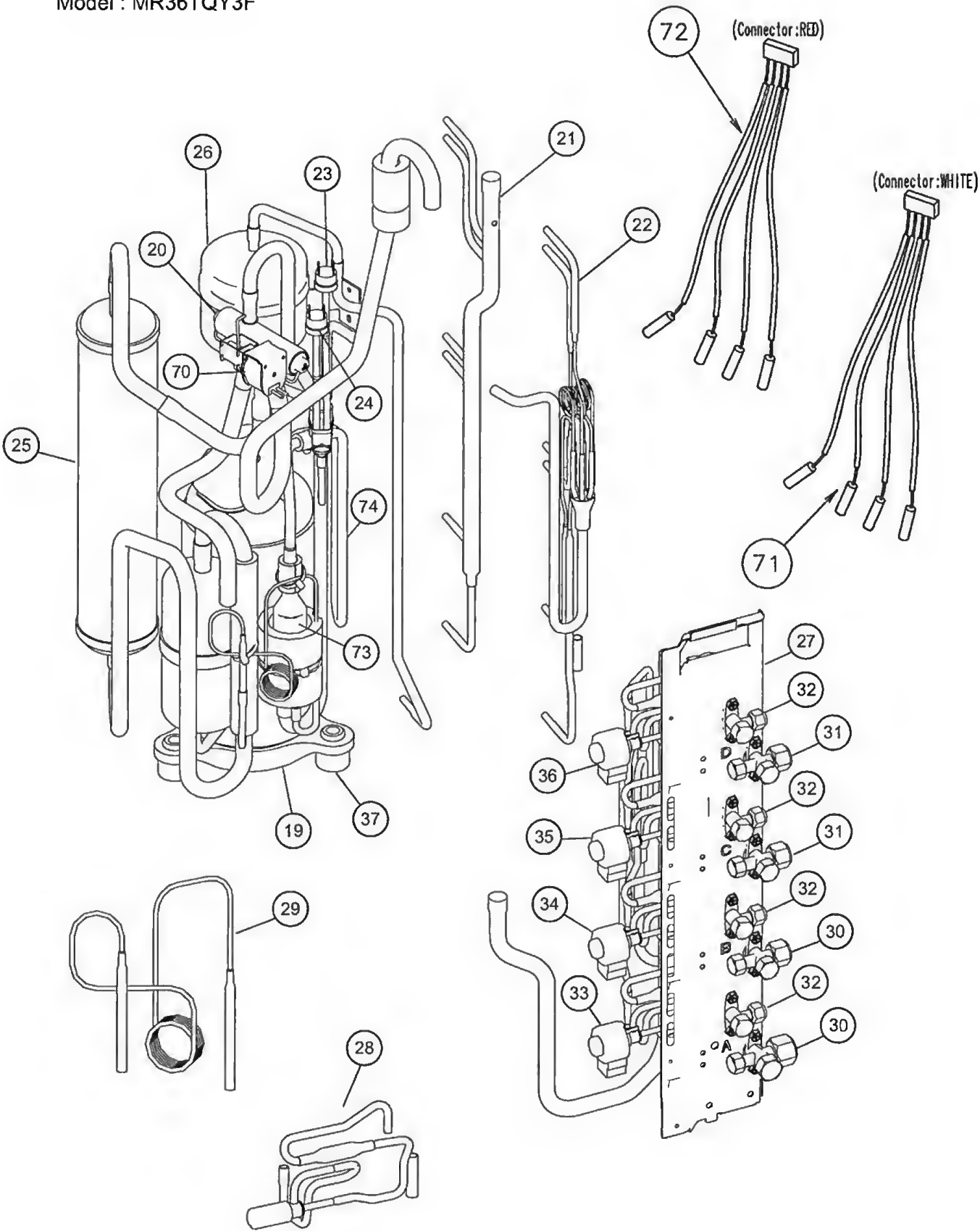
Model : MR36TQY3F



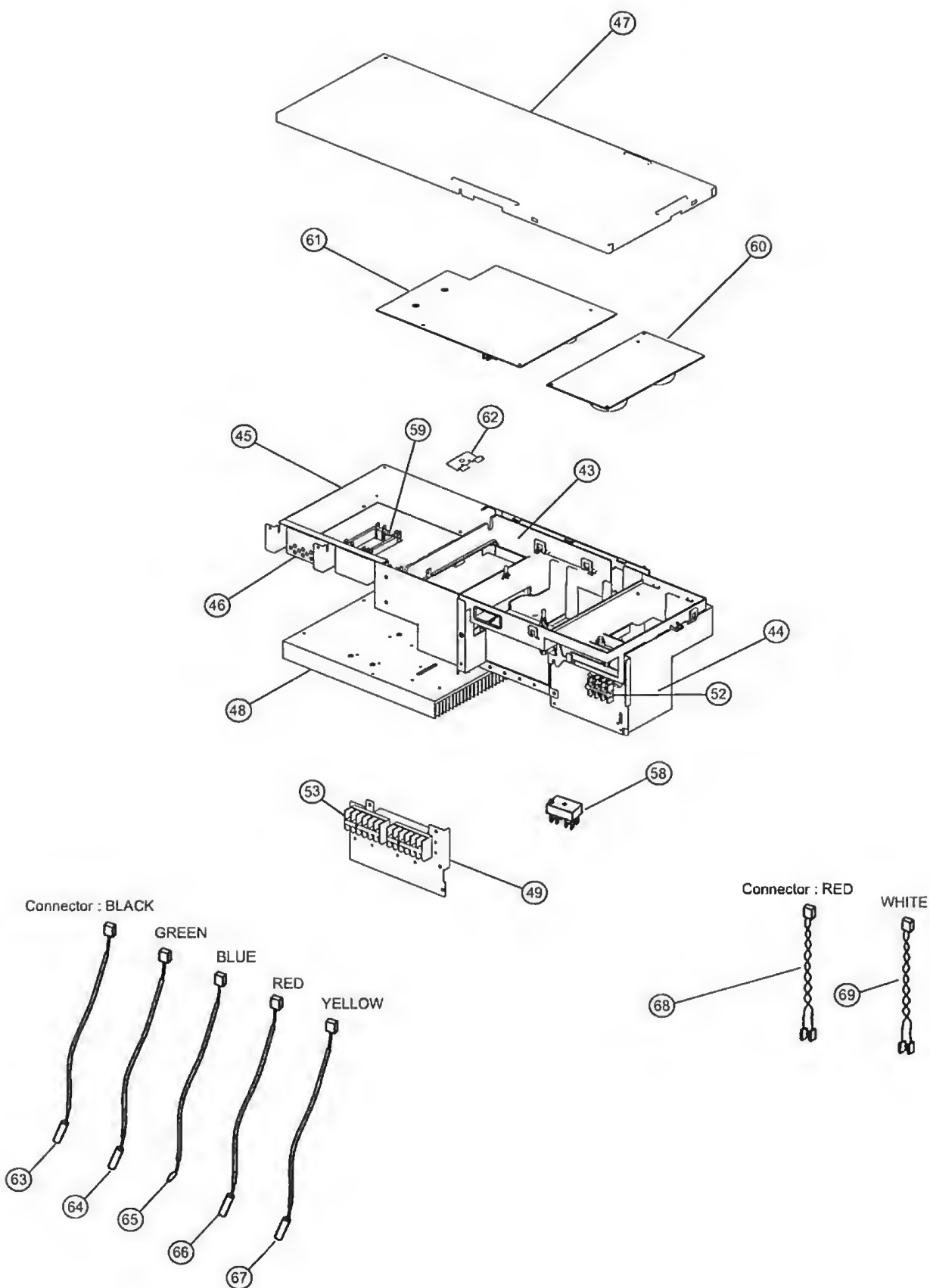
Model : MR36TQY3F



Model : MR36TQY3F



Model : MR36TQY3F



## PARTS LIST

### INDOOR UNIT

Ref. No	Description	Part No.			Ord. Q'ty
		MW09Y3FM	MW12Y3FM	MW18Y3FM	
1	AirFilter	67201200	67201200	67201200	
5	Clamper (Grille)	67200936	67200936	67200936	
6	FrontPanel	67201230	67201230	67201230	
7	Intake Grille Assy	67201232	67201232	67201232	
20	Gear-A	67201206	67201206	67201206	
21	Casing Assy	67201207	67201207	67201207	
24	Crossflow Fan Assy	67200918	67200918	67200918	
26	Clamp (Motor)	67201234	67201234	67201234	
27	Shaft Holder-C Assy	67200922	67200922	67200922	
28	Drain Hose Assy	67200406	67200406	67200406	
29	Drain Cap Assy	67201211	67201211	67201211	
30	Wire Clamper	67201236	67201236	67201236	
31	Holder(Room Thermistor)	67201248	67201248	67201248	
32	Cover(Switch)	67201213	67201213	67201213	
33	Evaporator Total Assy	67201214	67201214	67201214	
36	Joint Pipe Assy	67201238	67201238	67201238	
37	Insulation (Pipe)-E	67201217	67201217	67201217	
38	Holder (Evaporator)-L Assy	67201239	67201239	67201239	
39	Holder (Evaporator)-R	67201219	67201219	67201219	
40	WaterSeal	67201220	67201220	67201220	
42	AirSeal	67201215	67201215	67201215	
43	Terminal	67201222	67201222	67201222	
46	Step Motor	67201225	67201225	67201225	
48	Fan MotorAssy	67201240	67201240	67201240	
51	Remote Control Unit	67201249	67201249	67201249	
52	BracketPanel	67201242	67201242	67201242	
61-1	Flow Control Panel-U Assy	67201250	67201250	67201250	
61-2	Flow Control Panel-Z Assy	67201251	67201251	67201251	
236	Controller PCB Assy	67201252	67201253	67201254	
		(K04CP-0600HSE-C1)	(K04CP-0601HSE-C1)	(K04CP-0602HSE-C1)	
---	Pipe Temperature Thermistor	67201245	67201245	67201245	
---	Room Temperature Thermistor	67201246	67201246	67201246	
---	Indicator PCB Assy	67201247	67201247	67201247	
---	Evaporator B Assy			67201255	

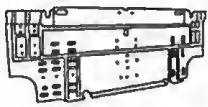

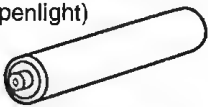






# OUTDOOR UNIT

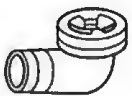

Ref. No	Description	Part No.	Ord. Q'ty	Ref. No	Description	Part No.	Ord. Q'ty
		MR36TQY3F				MR36TQY3F	
1	Top Panel Sub Assy	67201640		41	Washer(Rubber)	67210118	
2	Front Panel M	67201601		42	Frang Nut	67210119	
3	Fan Guard	67201602		43	Inverter Box A	67201667	
4	Grip Side	67201603		44	Inverter Box B Assy	67201668	
5	Service Panel M	67201641		45	Inverter Box C	67201669	
6	Right Panel M	67201642		46	Inverter Box Duct	67201670	
7	Valve Cover Sub Assy	67201643		47	InverterBox Cover	67201671	
8	Grip Service	67201644		48	Heat Sink A	67201672	
9	Grip	67201645		49	Inverter Box D	67201673	
10	Motor Bracket Sub Assy	67201646		52	Terminal (3P)	67201674	
11	Propeller Fan Assy	67201607		53	Terminal (6P)	67201675	
12	Motor. DC Brushless	67201608		58	Terminal	67201681	
13	CondenserA Assy	67201609		59	ACTPM	67201627	
14	Separate Wall Assy S	67201647		60	PWB Assy (Power Supply)	67201676	
15	Base Assy	67201648		61	PWB Assy (Controller)	67201677	
16	InverterAssy	67201649		62	Holder (Thermo)	67201678	
17	Coil. Choke	67201633		63	Heat Sink Thermistor	67201685	
18	Cap Foot	67201650		64	Compressor Temp Thermistor	67201637	
19	Compressor Sub Assy	67201651		65	Thermistor (Outdoor Temp)	67201688	
20	4-Way Valve Assy	67201652		86	Heat Exchanger Thermistor	67201639	
21	Inlet Pipe (Cond) A Assy	67201622		67	Discharg Temp Thermistor	67201635	
22	Outlet Pipe (Cond) A Assy	67201653		68	Wire (Pressure Sw)(Red)	67201679	
23	Pressure Switch A Assy	67201654		69	Wire (Pressure Sw)(White)	67201680	
24	Pressure Switch B Assy	67201655		70	Solenoid	67201681	
25	Accumulator Sub Assy	67201656		71	Thermistor (Pipe)(White)	67201682	
26	Receiver Tank Sub Assy	67201657		72	Thermistor (Pipe)(Red)	67201683	
27	Valve Plate A Assy	67201658		73	Oil Separater Assy	67201684	
28	Expansion Valve Assy	67201659		74	Discharg PipeA Assy	67201687	
29	Capillary Assy	67201660					
30	3-Way Valve Assy (1/2")	67201661					
31	3-Way Valve Assy (3/8")	67201662					
32	2-Way Valve Assy	67201663					
33	Coil (Expansion Valve)(A=Red)	67201470					
34	Coil (Expansion Valve) (B=White)	67201471					
35	Coil (Expansion Valve) (C=Green)	67201468					
36	Coil (Expansion Valve) (D=Blue)	67201469					
37	Rubber Seat (For Comp)	67210122					
38	Gasket	87201664					
39	Holder	87201665					
40	Terminal Cover (Comp)	67201666					

## STANDARD ACCESSORIES

### INDOOR UNIT

Name and Shape	Q'ty	Use	Part No.
Wall hook bracket 	1	For indoor unit installation	67201267
Remote control unit 	1	Use for air conditioner operation	67201241
Battery (penlight) 	2	For remote control unit	Local purchase
Cloth tape 	1	For indoor unit installation	67201932
Remote control unit holder 	1	Use as remote control unit holder	67201533
Tpping screw (big) ( $\phi$ 4 x 20) 	8	For wall hook bracket installation	67201933
Tpping screw (small) ( $\phi$ 3 x 12) 	2	For remote control unit holder installation	67201934

### OUTDOOR UNIT

Name and Shape	Q'ty	Use	Part No.
Drain pipe 	1	For outdoor unit drain piping work	67201706
Drain cap 	5		67201707

0604G3076